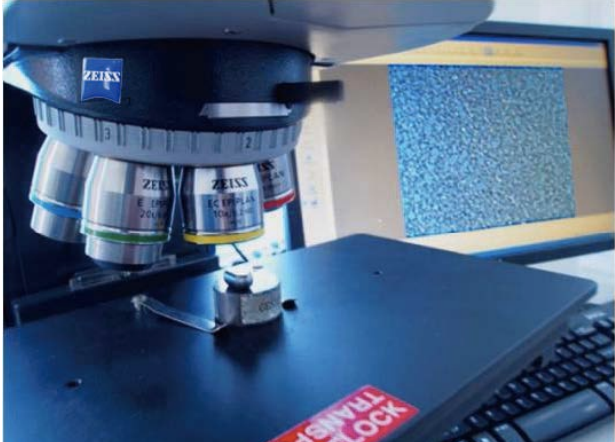


**C**  
**GRINS**  
CARBIDE



**Cemented Carbide  
Burr blanks**

CEMENTED CARBIDE BURR BLANKS



## About the company

**GRINS** company is an integrated supplier of tungsten carbide products and materials for tool plants, as well as oil and gas machinery building and metallurgical enterprises.

The **GRINS** company engineers provide comprehensive technical support of products, including product design, selection of optimum alloy grade and ensuring required quality parameters in compliance with customer requirements.

**GRINS** company supplies a wide range of tungsten carbide products for tool plants, including: blanks of various shapes and sizes for manufacture of dental milling cutters, rotary files for metalworking,

countersinking tools, as well as a wide range of rods for manufacturing monolithic rotary cutting tools.

The tungsten carbide products developed by us are produced on a contract basis on state-of-the-art production equipment of the leading global manufactures.

Manufacture of our products is certified to ISO9001 international standard, quality certificates specifying actual measurement results are attached to every batch of products. High-tech production, test and control equipment we use guarantees stably high quality of products we deliver to our clients.

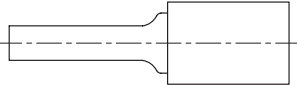
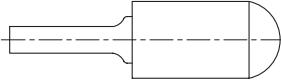
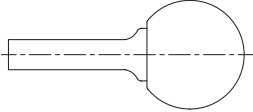
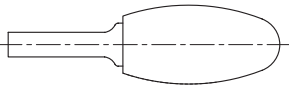
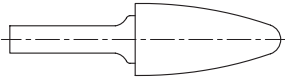
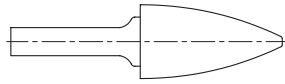
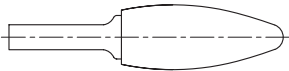
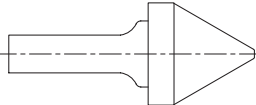
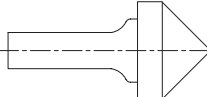
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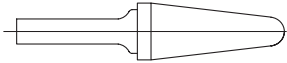
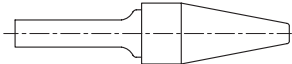
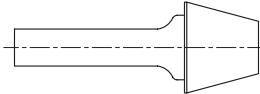
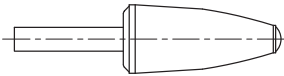
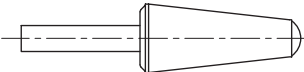
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## Grade Introduction of Cemented Carbide Burr Blanks

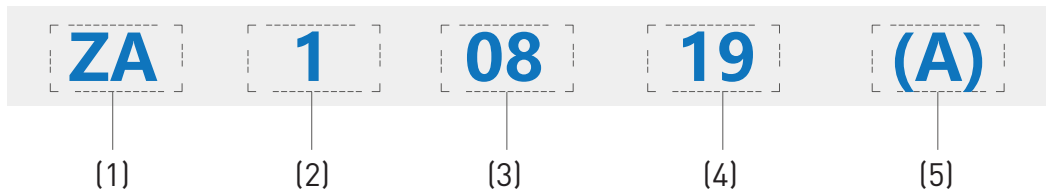
Grade	Cobalt Content (%)	Density (g/cm <sup>3</sup> )	Hardness (HRA)	WC Grain Size	T.R.S. (N/mm <sup>2</sup> )	Grades Introduction/ Application
GK10B	6.0	14.94	90.8	Medium	2000	Good wear resistance with a certain toughness
GK10A	6.0	14.94	91.5	Medium	2500	Better wear resistance than GK10B, same toughness as GK10B
GU20	10.3	14.42	91.7	Fine	3500	Very good wear resistance

## A summary of available shape of Burr Blank

SHAPE	TYPE	SHAPE CODE	SHAPE CODE (DIN 8033)	Page
	Cylindrical	ZA	ZYA	8
	Cylindrical Round Nose	ZC	WRC	9
	Spherical	ZD	KUD	10
	Oval	ZE	TRE	11
	Arch Round Nose	ZF	RBF	12
	Arch Pointed Nose	ZG	SPG	13
	Flame	ZH	-	14
	60° Cone	ZJ	KSJ	15
	90° Cone	ZK	KSK	16

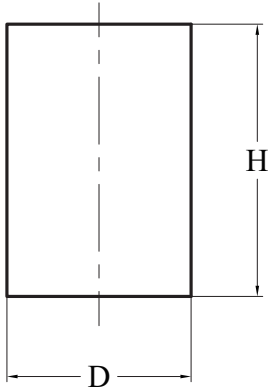
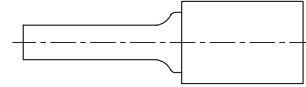
SHAPE	TYPE	SHAPE CODE	SHAPE CODE (DIN 8033)	Page
	Conical Round Nose	ZL	KEL	17
	Conical Pointed Nose	ZM	SKM	18
	Inverted Cone	ZN	WKN	19
	Arch Round Nose with Brazing Hole	ZF	-	20
	Conical Round Nose with Brazing Hole	ZL		21

### Burr Blanks Encoding System



- (1) Shape Code
- (2) Model Small Class Code
- (3) OD
- (4) Height, H
- (5) Product Serial Number

## Cylindrical, ZA

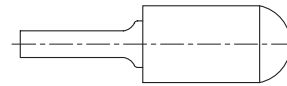
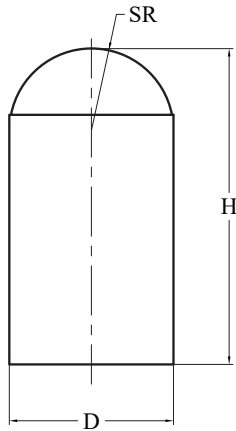


TYPE	D (mm)	H (mm)
ZA10604	6.73±0.13	4.90±0.25
ZA10612	6.73±0.13	12.70±0.25
ZA10819	8.31±0.13	19.05±0.25
ZA10919	9.91±0.13	19.05±0.25
ZA11125	11.51±0.13	25.40±0.25
ZA11325	13.08±0.13	25.40±0.25
ZA11625	16.26±0.13	25.40±0.25
ZA11919	19.48±0.15	19.05±0.25
ZA11925	19.48±0.15	25.40±0.25
ZA12225	22.66±0.15	25.40±0.25
ZA12525	25.88±0.18	25.40±0.25

**Note:** Can be customized according to customer's requirements



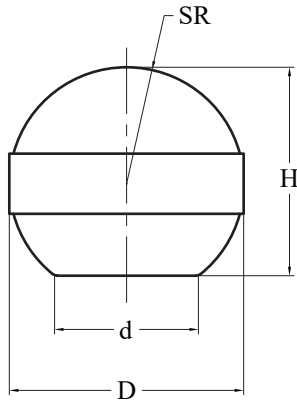
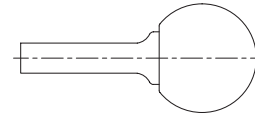
## Cylindrical Round Nose, ZC



TYPE	D (mm)	H (mm)	SR
ZC10612	6.73±0.13	12.70±0.25	3.37
ZC10819	8.31±0.13	19.05±0.25	4.17
ZC10919	9.91±0.13	19.05±0.25	4.95
ZC11125	11.51±0.13	25.40±0.25	5.77
ZC11325	13.08±0.13	25.40±0.25	6.55
ZC11625	16.26±0.13	25.40±0.25	8.13
ZC11912	19.48±0.15	12.70±0.25	9.75
ZC11919	19.48±0.15	19.05±0.25	9.74
ZC11925	19.48±0.15	25.40±0.25	9.75
ZC12525	25.88±0.18	25.40±0.25	12.95

**Note:** Can be customized according to customer's requirements

## Spherical, ZD

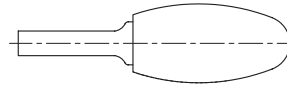
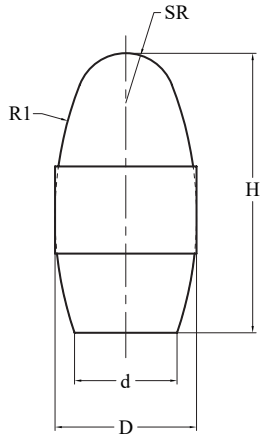


TYPE	D (mm)	H (mm)	SR
ZD10807	8.31±0.13	7.15±0.13	8.31
ZD10908	9.91±0.13	8.59±0.13	9.91
ZD11110	11.51±0.13	10.08±0.13	11.51
ZD11311	13.08±0.13	11.58±0.2	13.08
ZD11614	16.26±0.13	14.58±0.2	16.26
ZD11917	19.48±0.15	17.58±0.2	19.48
ZD12523	25.88±0.18	23.6±0.25	25.88

**Note:** Can be customized according to customer's requirements

CEMENTED CARBIDE BURR BLANKS

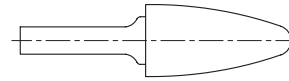
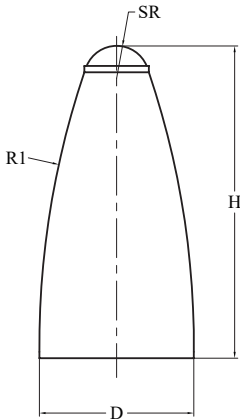
Oval, ZE



TYPE	D (mm)	H (mm)	SR	R1
ZE10609	6.73±0.13	9.53±0.25	2.51	10.85
ZE10915	9.91±0.13	15.88±0.25	4.09	22.35
ZE11322A	13.08±0.13	22.23±0.25	5.28	31.88
ZE11625	16.26±0.15	25.40±0.25	6.48	31.88

**Note:** Can be customized according to customer's requirements

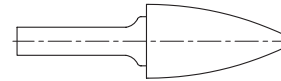
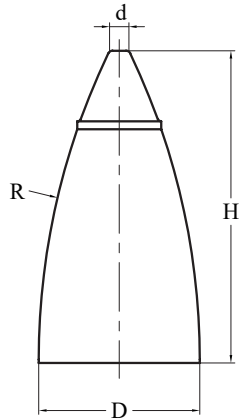
## Arch Round Nose, ZF



TYPE	D (mm)	H (mm)	SR	R1
ZF20612	6.73±0.13	12.70±0.25	1.73	41.40
ZF20918	9.91±0.13	19.05±0.25	2.49	58.42
ZF21125	11.51±0.13	25.40±0.25	2.49	82.68
ZF21319	13.08±0.13	19.05±0.25	3.30	44.7
ZF21325	13.08±0.13	25.40±0.25	3.30	82.68
ZF21625	16.26±0.13	25.40±0.25	4.93	76.33
ZF21925	19.48±0.13	25.40±0.25	4.93	54.10
ZF21931	19.48±0.15	32.75±0.25	4.93	84.30
ZF21938	19.48±0.15	38.10±0.25	4.93	128.75

**Note:** Can be customized according to customer's requirements

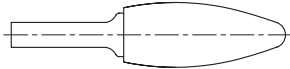
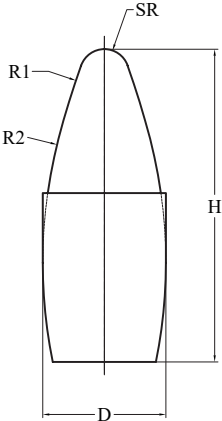
## Arch Pointed Nose, ZG



TYPE	D (mm)	H (mm)	d	R
ZG10612	6.73±0.13	12.70±0.25	1.07	25.53
ZG10825	8.31±0.13	19.05±0.25	1.40	50.93
ZG10919	9.91±0.13	19.05±0.25	1.42	38.23
ZG11319	13.08±0.13	19.05±0.25	1.85	33.48
ZG11325	13.08±0.13	25.40±0.25	1.85	57.28
ZG11625	16.26±0.13	25.40±0.25	1.85	47.75
ZG11925	19.48±0.15	25.40±0.25	1.91	41.43
ZG11938	19.48±0.15	25.40±0.25	2.24	86.31

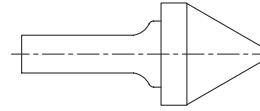
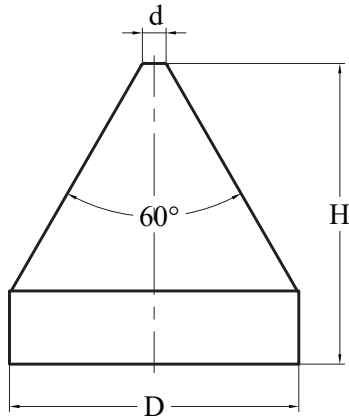
**Note:** Can be customized according to customer's requirements

Flame, ZH



TYPE	D (mm)	H (mm)	SR	R1
ZH10819	8.31±0.13	19.05±0.25	1.73	27.13
ZH11331	13.08±0.13	31.75±0.38	2.51	50.93
ZH11636	16.26±0.13	36.53±0.38	2.51	19.18
ZH11941	19.48±0.15	41.28±0.51	4.11	47.78

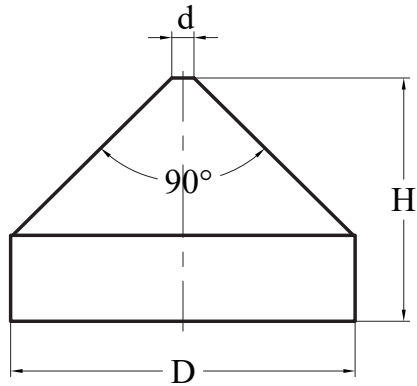
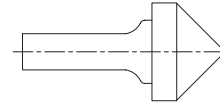
**Note:** Can be customized according to customer’s requirements

**60° Cone, ZJ**

TYPE	D (mm)	H (mm)	d
ZJ10911	9.91±0.13	11.13±0.25	0.81
ZJ11313	13.08±0.13	13.89±0.25	0.81
ZJ11617	16.26±0.13	17.48±0.25	1.60
ZJ11920	19.48±0.15	20.24±0.25	1.60
ZJ12524	25.88±0.18	24.61±0.25	3.18

**Note:** Can be customized according to customer's requirements

## 90° Cone, ZK

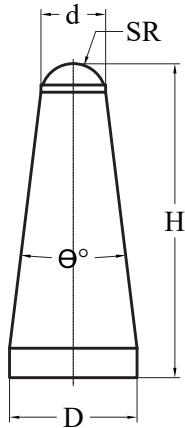
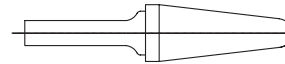


TYPE	D (mm)	H (mm)	d
ZK10907	9.91±0.13	7.95±0.25	0.81
ZK11309	13.08±0.13	9.53±0.25	0.81
ZK11612	16.26±0.13	12.29±0.25	1.60
ZK11913	19.48±0.15	13.89±0.25	1.60
ZK12516	25.88±0.18	16.28±0.25	3.18

**Note:** Can be customized according to customer's requirements



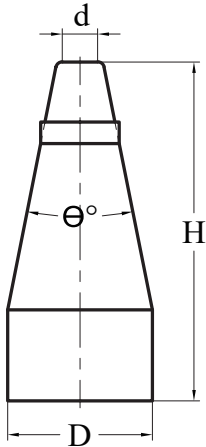
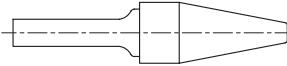
## Conical Round Nose, ZL



TYPE	D (mm)	H (mm)	SR	°
ZL10825	8.31±0.13	25.78±0.25	1.52	14°
ZL10930	9.91±0.13	30.68±0.38	1.78	14°
ZL11332A	13.08±0.13	32.28±0.38	3.33	14°
ZL11633	16.26±0.13	33.86±0.38	4.90	14°
ZL11637	16.26±0.13	37.03±0.38	3.81	14°
ZL11941	19.48±0.15	41.81±0.51	5.64	14°

**Note:** Can be customized according to customer's requirements

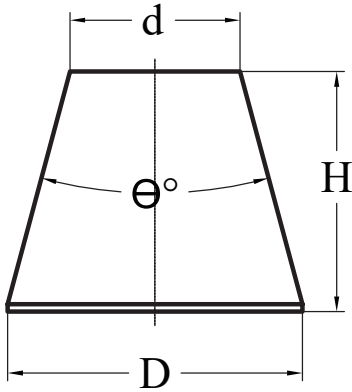
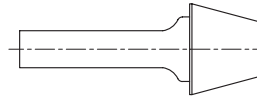
# Conical Pointed Nose, ZM



TYPE	D (mm)	H (mm)	d	°
ZM10919	9.91±0.13	19.30±0.25	1.85	28°
ZM11325	13.08±0.13	25.65±0.25	2.10	28°
ZM11628	16.26±0.13	28.98±0.38	2.03	31°

**Note:** Can be customized according to customer's requirements

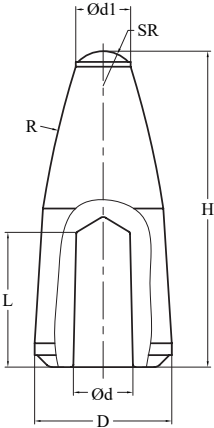
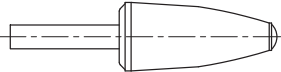
## Inverted Cone, ZN



TYPE	D (mm)	H (mm)	$\theta$
ZN10909	9.9±0.13	9.53±0.25	10°
ZN11312	13.08±0.13	12.70±0.25	28°
ZN11619	16.26±0.13	19.05±0.25	18°
ZN11915	19.48±0.15	15.88±0.25	30°

**Note:** Can be customized according to customer's requirements

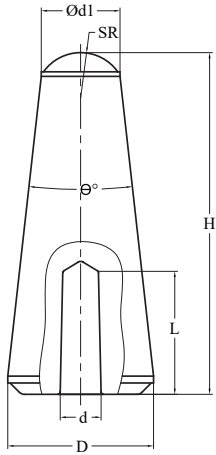
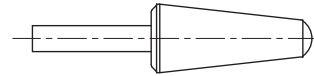
# Arch Round Nose with Brazing Hole, ZF



TYPE	D (mm)	H (mm)	SR	R	d	L
ZF30513	5.75±0.15	13.30±0.2	1.45	40	2.5	5.5
ZF30614A	6.65±0.15	13.80±0.2	2.5	40	2.5	5.5

**Note:** Can be customized according to customer's requirements

## Conical Round Nose with Brazing Hole, ZL

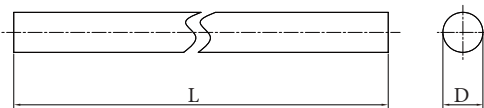


TYPE	D (mm)	H (mm)	SR	d	L
ZL30615	6.20±0.15	15.00±0.2	2.0	2.0	5.0
ZL30615A	6.40±0.15	15.00±0.2	2.0	1.8	5.4

**Note:** Can be customized according to customer's requirements



## Ground Rods



Type	Grade	D (mm)	L (mm)	h6
GR 1,6*19,5	GU20	1,6 +0,-0.006	19,5 +0,- 0.2	+
GR 2,35*45	GU20	2,35 +0, 0.008	45,0 +0.80,-0	+

**Note:** Can be customized according to customer's requirements

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